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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,519	08/26/2003	Michael M. Fainzilber	2314-269	5270

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EXAMINER	
ROONEY, NORA MAUREEN	
ART UNIT	PAPER NUMBER
1644	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	03/15/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 03/15/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-PAT-Email@rfem.com

Office Action Summary	Application No.	Applicant(s)	
	10/647,519	FAINZILBER ET AL.	
	Examiner	Art Unit	
	Nora M. Rooney	1644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 December 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) *7-20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *08/26/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-20 are pending.

2. Applicant's election, without traverse, of Group I, claims 1-6, in the reply filed on 12/05/2006 is acknowledged.

3. Claims 7-20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention.

4. Claims 1-6 are currently under examination as they read upon a substantially pure conopeptide having the general formula of SEQ ID NO:1.

5. Applicant's IDS filed on 08/26/2003 is acknowledged.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined

application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1-6 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-9 of U.S. Patent No. 6,624,288. Although the conflicting claims are not identical, they are not patentably distinct from each other because the conopeptides recited in claims 1-9 are all species of the genus of all conopeptides having the general formula of SEQ ID NO:1 wherein Xaa_1 is des-Xaa_1 or a peptide having 1-6 amino acids; Xaa_2 is a peptide having 5-6 amino acids; Xaa_3 is a peptide having 4 amino acids; Xaa_4 is Glu, γ-carboxyglutamic acid (γ - Glu) or Gln; Xaa_5 is a peptide having 3-4 amino acids; Xaa_6 is a

peptide having 3-6 amino acids; and Xaa_7 is des-Xaa_7 or a peptide having 2-9 amino acids, with the proviso that when Xaa_1 is des-Xaa_1, then Xaa_5 is not the tripeptide Ser-Asp-Asn of claim 1. For example, the substantially pure conopeptides PnVIIA (SEQ ID NO: 6), Tx6.4 (SEQ ID NO: 7), Tx6.9 (SEQ ID NO: 8), Tx6.6 (SEQ ID NO:10), Gm6.7 (SEQ ID NO: 12), Mr6.1 (SEQ ID NO: 13), Mr6.2 (SEQ ID NO:14) and Mr6.3 (SEQ ID NO:15) all satisfy the general formula of SEQ ID NO:1.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 1-6 are rejected under 35 U.S.C. 112, first paragraph, because the specification while being enabled for the substantially pure conopeptides PnVIIA (SEQ ID NO: 6), Tx6.4 (SEQ ID NO: 7), Tx6.9 (SEQ ID NO: 8), Tx6.6 (SEQ ID NO:10), Gm6.7 (SEQ ID NO: 12), Mr6.1 (SEQ ID NO: 13), Mr6.2 (SEQ ID NO:14) and Mr6.3 (SEQ ID NO:15), does not reasonably provide enablement for a substantially pure conopeptide or pharmaceutically acceptable salt thereof, said conopeptide **having** the general formula I: Xaa_1-Cys-Xaa_2-Cys-Xaa_3-Xaa_4-Cys-Cys-Xaa_5-Cys-Xaa_6-Cys-Xaa_7 (SEQ ID NO:1), wherein Xaa_1 **is des-Xaa_1 or a peptide having 1-6 amino acids**; Xaa_2 is **a peptide having 5-6 amino acids;** Xaa_3 is **a peptide having 4 amino acids**; Xaa_4 is Glu, γ-carboxyglutamic acid (γ - Glu) or Gln; Xaa_5 is **a peptide having 3-4 amino acids**; Xaa_6 is **a peptide having 3-6 amino acids**; and Xaa_7 **is des-Xaa_7 or a**

peptide having 2-9 amino acids, with the proviso that when Xaa_1 is des-Xaa_1, then Xaa_5 is not the tripeptide Ser-Asp-Asn of claim 1; wherein Xaa_4 is γ - Glu of claim 2; wherein Xaa_1 is des-Xaa_1 of claim 3; wherein Xaa_1 is **a peptide having 1-6 amino acids** of claim 4; wherein Xaa_7 is des-Xaa_7 of claim 5 and wherein Xaa_7 is **a peptide having 2-9 amino acids.**

The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

Factors to be considered in determining whether undue experimentation is required to practice the claimed invention are summarized In re Wands (858 F2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988)). The factors most relevant to this rejection are the scope of the claim, the amount of direction or guidance provided, the lack of sufficient working examples, the unpredictability in the art and the amount of experimentation required to enable one of skill in the art to practice the claimed invention. The specification disclosure is insufficient to enable one skilled in the art to practice the invention as broadly claimed without an undue amount of experimentation.

Applicant discloses only the substantially pure conopeptides PnVIIA (SEQ ID NO: 6), Tx6.4 (SEQ ID NO: 7), Tx6.9 (SEQ ID NO: 8), Tx6.6 (SEQ ID NO:10), Gm6.7 (SEQ ID NO: 12), Mr6.1 (SEQ ID NO: 13), Mr6.2 (SEQ ID NO:14) and Mr6.3 (SEQ ID NO:15); and the use of PnVIIA and TxVIIA as agonists of neuronal pacemaker cation channels.

The specification does not provide sufficient enablement for the scope of the claimed conopeptides "having" the general formula of SEQ ID NO:1. The term "having" is open language which encompasses polypeptides having an unlimited number of amino acids being added onto the N and/or C terminus of a conopeptide of the general formula of SEQ ID NO:1. The claims encomass polypeptides whose action as an agonist and modulator of slow inward cation channels depends on portions of the polypeptide other than conopeptide of SEQ ID NO:1. The scope ofthe enalement set forth in the specifiation is not commensurate in scope with the claims. Amendment of the claims to recite conopeptides "consisting" of the general formula of SEQ ID NO:1 would obviate this portion of the rejection.

There is insufficient guidance in the working examples to show that conopeptides of the formula of SEQ ID NO:1 can be used as agonists of neuronal pacemaker cation channels and to modulate slow inward cation channels in vertebrates.

McIntosh et al. (PTO-892, Reference U) teaches that biological activity of peptide toxins from cone snails is dependent upon highly conserved γ-carboxyglutamate residues within the peptide (In particular, page 14343, first paragraph). Carboxyglutamate residues appear to function as calcium ligands within proteins and the neurological action of the toxin depends upon calcium binding (In particular, page 14346, first and second full paragraphs). Chandler et al. (PTO-892, Reference V, abstract in particular) teaches that polypeptides from cone snail venom have antagonistic properties to N-methyl-D-aspartate (NMDA) that is dependent upon highly conserved γ-carboxyglutamate residues within the peptide.

Therefore, the functional polypeptide species of conopeptides of the formula of SEQ ID NO:1 are highly unpredictable. The large number of species represented by the formula of SEQ ID NO:1 encompass many inoperative species as evidence by the state of the art and the importance of particular residues within the conopeptide that retain neurostimulatory activity.

In addition, the specification gives no guidance as to what amino acids and/ or peptides may be substituted for the variable Xaa_1 through Xaa_7 positions that will still reatin the desired functional characteristics. Further, the specification does not detail whether the amino acids may be only be naturally occurring or whether they may also be modified and retain function as agonists of neuronal pacemaker cation channels that can modulate the slow inward cation channels in vertebrates. The scope of enablement set forth in the specification is not commensurate in scope with the claims.

Reasonable correlation must exist between the scope of the claims and scope of the enablement set forth. In view on the quantity of experimentation necessary the limited working examples, the nature of the invention, the state of the prior art, the unpredictability of the art and the breadth of the claims, it would take undue trials and errors to practice the claimed invention.

10. Claims 1-6 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled

in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicant is in possession of: the substantially pure conopeptides PnVIIA (SEQ ID NO: 6), Tx6.4 (SEQ ID NO: 7), Tx6.9 (SEQ ID NO: 8), Tx6.6 (SEQ ID NO:10), Gm6.7 (SEQ ID NO: 12), Mr6.1 (SEQ ID NO: 13), Mr6.2 (SEQ ID NO:14) and Mr6.3 (SEQ ID NO:15); and the use of PnVIIA and TxVIIA as agonists of neuronal pacemaker cation channels.

Applicant is not in possession of a substantially pure conopeptide or pharmaceutically acceptable salt thereof, said conopeptide having the general formula I: Xaa_1-Cys-Xaa_2-Cys-Xaa_3-Xaa_4-Cys-Cys-Xaa_5-Cys-Xaa_6-Cys-Xaa_7 (SEQ ID NO:1), wherein Xaa_1 **is des-Xaa_1 or a peptide having 1-6 amino acids**; Xaa_2 is **a peptide having 5-6 amino acids;** Xaa_3 is **a peptide having 4 amino acids**; Xaa_4 is Glu, γ-carboxyglutamic acid (γ - Glu) or Gln; Xaa_5 is **a peptide having 3-4 amino acids**; Xaa_6 is **a peptide having 3-6 amino acids**; and Xaa_7 **is des-Xaa_7 or a peptide having 2-9 amino acids,** with the proviso that when Xaa_1 is des-Xaa_1, then Xaa_5 is not the tripeptide Ser-Asp-Asn of claim 1; wherein Xaa_4 is γ - Glu of claim 2; wherein Xaa_1 is des-Xaa_1 of claim 3; wherein Xaa_1 is **a peptide having 1-6 amino acids** of claim 4; wherein Xaa_7 is des-Xaa_7 of claim 5 and wherein Xaa_7 is **a peptide having 2-9 amino acids**.

Applicant has disclosed only conopeptides PnVIIA (SEQ ID NO: 6), Tx6.4 (SEQ ID NO: 7), Tx6.9 (SEQ ID NO: 8), Tx6.6 (SEQ ID NO:10), Gm6.7 (SEQ ID NO: 12), Mr6.1 (SEQ ID NO: 13), Mr6.2 (SEQ ID NO:14), Mr6.3 (SEQ ID NO:15) and TxVIIA; therefore, the skilled artisan cannot envision all the contemplated polypeptide possibilities recited in the instant

claims. Consequently, conception cannot be achieved until a representative description of the structural and functional properties of the claimed invention has occurred, regardless of the complexity or simplicity of the method. Adequate written description requires more than a mere statement that it is part of the invention. See *Fiers v. Revel*, 25 USPQ2d 1601, 1606 (CAFC1993). The Guidelines for the Examination of Patent Application Under the 35 U.S.C.112, ¶ 1"Written Description" Requirement make clear that the written description requirement for a claimed genus may be satisfied through sufficient description of a representative number of species disclosure of relevant, identifying characteristics, i.e., structure or other physical and or chemical properties, by functional characteristics coupled with a known or disclosed correlation between function and structure, or by a combination of such identifying characteristics, sufficient to show the applicant was in possession of the genus (Federal Register, Vol. 66, No. 4, pages 1099-1111, Friday January 5, 20001, see especially page 1106 3rd column).

Vas-Cath Inc. v. Mahurkar, 19 USPQ2d 1111, makes clear that "applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention. The invention is, for purposes of the written description inquiry, whatever is now claimed." (See page 1117.) The specification does not "clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed." (See Vas-Cath at page 1116.). Consequently, Applicant was not in possession of the instant claimed invention. See University of California v. Eli Lilly and Co. 43 USPQ2d 1398.

Applicant is directed to the final Guidelines for the Examination of Patent Applications Under the 35 U.S.C. 112, ¶ 1 "Written Description" Requirement, Federal Register, Vol. 66, No. 4, pages 1099-1111, Friday January 5, 2001.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1, 4 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Eldridge et al. (IDS filed on 08/26/2003).

Eldridge et al. teaches the peptide A(Xaa_1 peptide of 1-6 amino acids) -C-AETGAV(Xaa_2 peptide of 5-6 amino acids)-C-VHND(Xaa_3 peptide of 4 amino acids)-E(Glu)-C-C-SGA(Xaa_5 peptide of 3-4 amino acids)-C-SPIFNY(Xaa_6 peptide having 3-6 amino acids)-C-LPQ(Xaa_7 peptide having 2-9 amino acids) in Figure 2. In the peptide, Xaa_1 is a peptide having 1-6 amino acids as recited in claim 4 and Xaa_7 is a peptide having 2-9 amino acids as recited in claim 6.

The reference teachings anticipate the claimed invention.

13. Claims 1-3 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 95/01436 (PTO-892, Reference N, SEQ ID NO:10 on page 46).

WO 95/01436 teaches the peptide (Xaa_1 is des-Xaa_1) -C-KTYSKY (Xaa_2 peptide of 5-6 amino acids)-C-XADS(Xaa_3 peptide of 4 amino acids)-X(Glu, γ - Glu or Gln)-C-C-TXQ(Xaa_5 peptide of 3-4 amino acids)-C-VRSY(Xaa_6 peptide having 3-6 amino acids)-C-TLF(Xaa_7 peptide having 2-9 amino acids) in SEQ ID NO:10 on page 46 and in claim 18. In the peptide, Xaa_1 is des-Xaa_1 as recited in claim 3 and Xaa_5 is not Ser-Asp-Asn as recited in claim 1. Xaa_4 is any amino acid including Glu, γ - Glu or Gln as recited in claim 2. Xaa_7 is a peptide having 2-9 amino acids as recited in claim 6

The reference teachings anticipate the claimed invention.

14. Claims 1, 3 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 94/10196 (PTO-892, Reference O, SEQ ID NO:3).

WO 94/10196 teaches the peptide (Xaa_1 is des-Xaa_1) -C-AEFQSK (Xaa_2 peptide of 5-6 amino acids)-C-KKDS(Xaa_3 peptide of 4 amino acids)-E(Glu)-C-C-GTLE(Xaa_5 peptide of 3-4 amino acids)-C-SPTWKW(Xaa_6 peptide having 3-6 amino acids)-C-VYPSPF(Xaa_7 peptide having 2-9 amino acids) in SEQ ID NO:3 on page 19 and in claim 1 on page 24. In the peptide, Xaa_1 is des-Xaa_1 as recited in claim 3 and Xaa_5 is not Ser-Asp-Asn as recited in claim 1. Xaa_7 is a peptide having 2-9 amino acids as recited in claim 6.

The reference teachings anticipate the claimed invention.

15. Claims 1 and 4-5 are rejected under 35 U.S.C. 102(a) as being anticipated by Ahrens et al. (PTO-892, Reference W).

Ahrens et al. teaches the peptide MGVKSALFIMAVFAAANV-QYVLAA(Xaa_1 peptide of 1-6 amino acids) -C-AETGAV(Xaa_2 peptide of 5-6 amino acids)-C-VHSD(Xaa_3 peptide of 4 amino acids)-E(Glu)-C-C-SGA(Xaa_5 peptide of 3-4 amino acids)-C-SPVFNY(Xaa_6 peptide having 3-6 amino acids)-C-(Xaa_7 is des- Xaa_7) in Figure 4 on page 389 sequence 'OpCtl-1'. In the peptide, Xaa_1 is a peptide having 1-6 amino acids as recited in claim 4 and Xaa_7 is a peptide having 2-9 amino acids as recited in claim 6. The conopeptide of Ahrens et al. is prior art because the term "having the general formula" is open language that includes the addition of other amino acids to the N and/or C terminus.

The reference teachings anticipate the claimed invention.

16. Claims 1 and 4-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Liang et al. (PTO-892, Reference X).

Liang et al. teaches the peptide A (Xaa_1 peptide of 1-6 amino acids) -C-KGVFDA (Xaa_2 peptide of 5-6 amino acids)-C-TPGKN(Xaa_3 peptide of 4 amino acids)-E(Glu)-C-C-PNRV(Xaa_5 peptide of 3-4 amino acids)-C-SDKHKW(Xaa_6 peptide having 3-6 amino acids)-C- KWKL(Xaa_7 is a peptide of 2-9 amino acids) in Figure 7 on page 977 sequence 'OpCtl-1'. In the peptide,

Xaa_1 is a peptide having 1-6 amino acids as recited in claim 4 and Xaa_7 is a peptide having 2-9 amino acids as recited in claim 6.

The reference teachings anticipate the claimed invention.

17. Claims 1, 4 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Ayres et al. (PTO-892, Page 2, Reference U).

Ayres et al. teaches the peptide MQIKTVLLAFAMFAALNA-QHVLAA (Xaa_1 peptide of 1-6 amino acids) -C-AETGAV(Xaa_2 peptide of 5-6 amino acids)-C-VHND(Xaa_3 peptide of 4 amino acids)-E(Glu)-C-C-SGA(Xaa_5 peptide of 3-4 amino acids)-C-SPIFNY(Xaa_6 peptide having 3-6 amino acids)-C-LPQ(Xaa_7 peptide having 2-9 amino acids) in Figure 2. In the peptide, Xaa_1 is a peptide having 1-6 amino acids as recited in claim 4 and Xaa_7 is a peptide having 2-9 amino acids as recited in claim 6. The conopeptide of Ayres et al. is prior art because the term "having the general formula" is open language that includes the addition of other amino acids to the N and/or C terminus.

The reference teachings anticipate the claimed invention.

18. Claims 1-3 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,432,155 (PTO-892, Reference A).

The 155' Patent teaches the J010 peptide (Xaa_1 is des-Xaa_1) -C-KTYSKY (Xaa_2 peptide of 5-6 amino acids)-C-γGluADS(Xaa_3 peptide of 4 amino acids)-γGlu (γGlu)-C-C-TγGlu Q(Xaa_5 peptide of 3-4 amino acids)-C-VRSY (Xaa_6 peptide having 3-6 amino acids)-C-TLF(Xaa_7

peptide having 2-9 amino acids) in SEQ ID NO:10 in column 3, lines 50-53 and column 25. In the peptide, Xaa_1 is des-Xaa_1 as recited in claim 3 and Xaa_5 is not Ser-Asp-Asn as recited in claim 1. Xaa_4 is γGlu as recited in claim 2. Xaa_7 is a peptide having 2-9 amino acids as recited in claim 6.

The reference teachings anticipate the claimed invention.

19. No claim is allowed.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nora M. Rooney whose telephone number is (571) 272-9937. The examiner can normally be reached Monday through Friday from 8:30 am to 5:00 pm. A message may be left on the examiner's voice mail service. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Chan can be reached on (571) 272-0841. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

March 3, 2007

Nora M. Rooney, M.S., J.D.

Patent Examiner

Technology Center 1600

Maher M. Haddad

MAHER M. HADDAD
PRIMARY EXAMINER